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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.		
10/644,488	08/20/2003	Peter Greenwood	ANO6272/3554	7401		
75	7590 02/08/2005			EXAMINER		
Michelle J. Burke Akzo Nobel Inc Intellectual Property Dept. 7 Livingstone Avenue			MITCHELL, KATHERINE W			
			ART UNIT	PAPER NUMBER		
Dobbs Ferry, N	Y 10522		3677			
			DATE MAILED: 02/08/2005	5		

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)	i			
		10/644,488	GREENWOOD				
	Office Action Summary	Examiner	Art Unit				
		Katherine W. Mitchell	3677				
Period fo	The MAILING DATE of this communication People	tion appears on the cover sheet w	rith the correspondence address				
A SH THE - Exte after - If the - If NO - Failu Any	CORTENED STATUTORY PERIOD FOR MAILING DATE OF THIS COMMUNICA ensions of time may be available under the provisions of 3 SIX (6) MONTHS from the mailing date of this communical period for reply specified above is less than thirty (30) of Diperiod for reply is specified above, the maximum statuture to reply within the set or extended period for reply will reply received by the Office later than three months after the patent term adjustment. See 37 CFR 1.704(b).	ATION. 37 CFR 1.136(a). In no event, however, may a cation. lays, a reply within the statutory minimum of thi ory period will apply and will expire SIX (6) MO, by statute, cause the application to become A	reply be timely filed rty (30) days will be considered timely. NTHS from the mailing date of this communication. BANDONED (35 U.S.C. § 133).	ation.			
Status							
1)	Responsive to communication(s) filed	on 18 November 2004.					
· ·		☐ This action is non-final.					
3)	,						
Disposit	ion of Claims						
5)□ 6)⊠ 7)□	Claim(s) 1-20 is/are pending in the app 4a) Of the above claim(s) 2,3,5,7,9,11, Claim(s) is/are allowed. Claim(s) 1,4,6,8,10,12 and 14 is/are re Claim(s) is/are objected to. Claim(s) are subject to restriction	13 and 15-20 is/are withdrawn fro	om consideration.				
Applicat	ion Papers						
10)□	The specification is objected to by the Enthe drawing(s) filed on <u>NONE</u> is/are: a Applicant may not request that any objected Replacement drawing sheet(s) including the The oath or declaration is objected to be	n) accepted or b) objected to on to the drawing(s) be held in abeya e correction is required if the drawing	nce. See 37 CFR 1.85(a). g(s) is objected to. See 37 CFR 1.12				
Priority (under 35 U.S.C. § 119						
а)	Acknowledgment is made of a claim for All b) Some * c) None of: 1. Certified copies of the priority do 2. Certified copies of the priority do 3. Copies of the certified copies of application from the International See the attached detailed Office action for	cuments have been received. cuments have been received in the priority documents have been large (PCT Rule 17.2(a)).	Application No n received in this National Stage				
Attachmen	• •	□					
2) Notice Notice 3) Information	ce of References Cited (PTO-892) ce of Draftsperson's Patent Drawing Review (PTO mation Disclosure Statement(s) (PTO-1449 or PT er No(s)/Mail Date	-948) Paper No	Summary (PTO-413) (s)/Mail Date Informal Patent Application (PTO-152)				

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DETAILED ACTION

Election/Restrictions

- 1. Applicant's election without traverse of Claims 1,4,6,8,10,12, and 14 in the reply filed on 11/18/2004 is acknowledged. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.
- 2. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

- 3. The following is a quotation of the second paragraph of 35 U.S.C. 112:
 The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 4. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 recites the limitation "the particle size distribution" in line 2. There is insufficient antecedent basis for this limitation in the claim. Also, it is unclear exactly what "lower than about 15% by numbers" means.

Claim Rejections - 35 USC § 102

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5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 6. Claims 1,6, 8, 10, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Crinkelmeyer USP 4102400.

Re claims 1 and 14: Crinkelmeyer teaches a method of sealing a leaking cavity comprising injecting into said cavity (col 2 lines 5-13) a grouting composition comprising an alkali metal silicate or organic silicate, colloidal silica particles, and at least one gelling agent (col 3 lines 27-52, note that ller's teachings are incorporated by reference, and calcium chloride is an alkaline metal salt), wherein the composition has a weight ratio of silica to silicate of from about 2:1 to about 100:1 (col 7 lines 14-20 and col 6 lines 5-32)

Further Re claim 6: A hydraulic binder is taught in col 4 line 48 – col 5 line 27).

Further Re claims 8 and 10: A ratio of silica to silicate of from about 3:1 to 70:1 and about 6:1 to about 20:1 is taught in col 7 lines 14-20 and col 6 lines 5-32.

Claim Rejections - 35 USC § 103

- 7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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8. Claims 1, 4, 8,10, 12, and 14 are rejected are rejected under 35 U.S.C. 102(b) as anticipated by Bartlett et al USP 5370478, hereafter called Bartlett or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bartlett.

Re claims 1,4,8,10, and 14: Bartlett teaches a method of sealing a leaking cavity in col 5 lines 5-65, col 7 lines 36-52 and col 8 lines 63-68, comprising injecting into said cavity an alkali metal silicate or organic silicate (abstract), colloidal silica (silica sol, abstract) and at least one gelling agent (NaCl, which is an alkali metal salt). Examples 1 and 2 have the colloidal silica sol reacting with NaCl, thus inherently an alkali metal (sodium) silicate will be formed at a ration of silica to silicate of from about 2:1 to 100:1, including 3:1 to 70:1 and 6:10 to 20:1. Col 2 lines 28-44 teach the composition as a sealing composition. Col 5 lines 20-31 teach that the colloidal silica was non-aggregated, thus inherently the S-value was between about 30 and 90. Non-aggregated inherently teaches an S value of between 30 and 90, as applicant has defined S-value as characterizing the extent of aggregation of the silica particles in silica sol on page 4, lines 7-8.

While examiner believes non-aggregated inherently teaches an S value between 30 and 90, if it is held that this is not inherent, it would have been obvious to one of ordinary skill in the art, having the teachings of Bartlett before him/her at the time the invention was made, to modify Bartlett to use a sol with an high S value of between 30 and 90 in order to ensure non-aggregated sols, as applicant has noted in admitted prior art that ller and Dalton correlate a high S value with low aggregation, and developed the S value specifically to characterize the extent of aggregation. One would have been

motivated to make such a combination because non-aggregated sols would have been obtained, as taught/suggested by Bartlett, and non-aggregated sols are more fully dispersed and thus inherently able to more uniformly permeate and uniformly seal than a sol with aggregated {larger} particles, and faster gelling time and higher gel rates would be obtained as discussed by Bartlett in col 5 lines 28-65. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have used such a range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233, and a nonagglomerated sol, without specifying a specific S-value, would obviously rule out values near zero.

Re claim 12: A relative standard deviation of silica particle size lower than about 15% by numbers is taught in col 5 lines 20-27 and col 10 lines 13-24.

Conclusion

- 9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
- 10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine W. Mitchell whose telephone number is 703-305-6713. The examiner can normally be reached on Mon Thurs 10 AM 8 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on 703-306-4115. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Katherine W Mitchell Examiner Art Unit 3677

Kwm 2/5/2005

Japherne Mikally